

**BY ORDER OF THE COMMANDER  
22D AIR REFUELING WING**

**MCCONNELL AIR FORCE BASE  
INSTRUCTION 21-110**



**25 JULY 2012**

**Maintenance**

**WEIGHT AND BALANCE PROGRAM**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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(Colonel Steven B. Hardy)

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This McConnell Air Force Base instruction prescribes Weight and Balance Program procedures. This instruction augments AFI 21-101, *Aircraft and Equipment Maintenance Management*, AFI 11-2KC-135, Volume 3 Addenda A, *C/KC-135 Operations Procedures*; AFD 21-1, *Air and Space Maintenance*; AFI 11-301V1, *Aircrew Life Support Program* and T.O. 1-1B-50, *Basic Technical Order for USAF Aircraft Weight and Balance*. This instruction is applicable to all 22d Maintenance Group (MXG), 22d Operations Group (OG) and 931st Air Reserve Group (ARG) personnel. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW with the Air Force Records Information Management System (AFRIMS) located at <https://www.my.af.mil/gcss-af61a/afrims/afrims/>. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Form 847s from the field through the appropriate functional's chain of command.

**SUMMARY OF CHANGES**

This document has been substantially revised and must be completely reviewed. The purpose paragraph has changed. **Para 1** content deleted, **para 2** moved to **para 1**, **para 3** moved to **para 1.1** with a title change, **para 3.1** changed to **para 1.1.1** with content change, **para 3.2** deleted, **para 3.3** changed to **para 1.1.2** with content change, **para 4** changed to **para 1.2** with title change, **para 4.1-4.4** deleted, **para 1.2.1-1.2.3** added, **para 5** changed to **para 1.3**, **para 1.3** title changed, **para 5.1** changed to **para 1.3.1** with content change, **para**

5.2 deleted, para 5.3 changed to para 1.3.2 with content change, para 1.3.3 added, para 5.4 changed to 1.3.4 with content change, para 5.5 and 5.6 deleted, para 5.7 and 5.8 changed to para 1.3.5 with content change, para 6 changed to para 1.4 with title change, para 6.1-6.2 changed to para 1.4.1- 1. 1.4.3, para 7 changed to para 1.5 with title change, para 7.1-7.2

deleted, para 1.5.1-1.5.4 added, para 8 changed to para 1.6 with title change, para 8.1 changed to para 1.6.1, para 8.2 changed to 1.6.2, para 9 deleted, para 2 added, para 3 added, para 4 added.

**1. Responsibilities:** Weight and balance procedures, if not followed correctly, may adversely affect aircraft performance. Procedures outlined in the references of this instruction must be strictly adhered to. Direct any questions to the weight and balance program managers, MXG/DCM Quality Assurance (QA).

**1.1. 22 MXG QA Weight and Balance Program Manager (W&BPM) will:**

1.1.1. Maintain a current weight and balance letter to include the following information: Tail number, series design, basic weight, basic moment and last update. Ensure aircrews and wing planners have up-to-date information available for mission planning. This information is available on the McConnell website at: [https://eim.amc.af.mil/org/22og/22og\\_ogv/default.aspx](https://eim.amc.af.mil/org/22og/22og_ogv/default.aspx). Primary W&B manager or authorized representative will ensure a current copy of the Automated Weight and Balance Scheduler (AWBS) will be sent out monthly to 22 OG Standardization and Evaluation (OGV). <https://afkm.wpafb.af.mil/ASPs/DocMan/DOCMain.asp?FolderID=AM-OP-01-34-12&Filter=AM-OP-01-34>

1.1.2. Weight and balance supplemental handbooks are maintained on the aircraft in the technical order cabinet located on the aft wall of the latrine. QA maintains the weight and balance primary handbook and historical records in the QA office.

**1.2. 22 OG/OGV will:**

1.2.1. Post and maintain copies of all locally developed standardized AF IMT 4100s on the 22 OGV website to ensure proper loading of aircraft.

1.2.2. Provide Alternate Mission Equipment (AME) -21 and QA any changes to the standardized local aircraft configuration (i.e. Aero Medical, roller missions, etc.) allowing sufficient time to load aircraft. Use locally developed AF IMT 4100s for changes affecting standard configuration.

1.2.3. Make clear and concise entries in aircraft forms concerning Chart-C discrepancies to include the discrepancy, item and location. Aircrew will notify QA of discrepancies at debrief.

**1.3. AMXS AME-21 :**

1.3.1. Ensure all AME-21 equipment weights are available for use in determining aircraft weight.

1.3.2. Forward all AME-21 equipment weights to the 22 OG Air Refueling Manager (22 OG/OGV) to aid the boom operators in mission planning and developing new AF IMT 4100 configurations as weights or new items are added to inventory.

1.3.3. Ensure accurate legible copies of the AF IMT 4100 configuration is posted in the weight and balance book at the time of configuration.

1.3.4. Annotate and place the equipment listed on the AF IMT 4100 accurately on the aircraft. Remove the AF IMT 4100 when the aircraft is downloaded.

1.3.5. Notify the QA Weight & Balance program manager when an upload or download for any weight changes, i.e. acceptance, depot input, PCS, depot return or equipment modification.

**1.4. Maintenance Operations Squadron (MOS) Plans, Scheduling and Documentation :**

1.4.1. Notify W&BPM before starting and upon completion of any TCTOs affecting aircraft weight and balance.

1.4.2. Create a G081 AFTO Form 781A entry for any TCTO requiring a weight and balance update when issued to the primary agency for completion of TCTO. Entry in AFTO 781A should read "A/C requires weight and balance update due to TCTO XXXX accomplishment."

1.4.3. Notify W&BPM of pending aircraft PCS and depot arrivals or departures A.S.A.P before departure or arrival if deviated from weekly schedule.

**1.5. 22 OG Life Support personnel will:**

1.5.1. Ensure all life support equipment weights are available for use in determining aircraft weight.

1.5.2. Forward all life support equipment weights to the 22 OG Air Refueling Manager (22 OG/OGV) & W&B program managers to aid the boom operators in mission planning and developing AF IMT 4100 as weights or new items are added to or deleted from inventory.

1.5.3. Place all life support equipment in pre-approved locations and secure on the aircraft according to day-to-day AF IMT 4100 configurations and IAW T.O. 1C-135-9.

1.5.4. Notify W&BPM of weight and balance as soon as changes are made.

**1.6. QA Product Improvement Manager will work with Contract Field Team to provide W&BPM:**

1.6.1. Aircraft weight and balance book within 24 hours of receipt of the aircraft. If the aircraft is received on a weekend, deliver the book the following duty day.

1.6.2. A list of TCTOs in work that may affect weight and balance of aircraft.

**2. AMXS and Maintenance Squadron Production Supervision will:**

2.1. Notify the W&BPM at the start of any TCTO that alters the aircraft center of gravity through the removal or addition of equipment by maintenance personnel on any aircraft.

2.2. Notify W&BPM of weight and balance as soon as changes are made. IAW T.O 00-20-1

RICKY N. RUPP, Colonel, USAF  
Commander

**Attachment 1****GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFMAN 33-363, *Management of Records*, 1 March 2008

AFI 21-101, *Aircraft and Equipment Maintenance Management*, 26 July 2010

AFI 11-2KC-135V3, *C/KC-135 Operations Procedures*, 18 September 2008

AFPD 21-1, *Air and Space Maintenance*, 25 February 2003

AFI 11-301V1, *Aircrew Flight Equipment (AEF) Program*, 25 February 2009

T.O. 1-1B-50, *Basic Technical Order for USAF Aircraft Weight and Balance*

T.O. 1C-135-9

**Prescribed Forms**

No Forms or IMTs prescribed by this publication.

**Adopted Form**

AF Form 847, *Recommendation for Change of Publication*

AF Form 4100, *KC-135 Load Planning Worksheet*

AFTO Form 781A, *Maintenance Discrepancy and Work Document*

***Abbreviations and Acronyms***

**AF**— Air Force

**AFB**— Air Force Base

**AFMAN**—Air Force Manual

**AFRIMS**—Air Force Records Information Management System

**AME**—Alternate Mission Equipment

**ARG**—Air Reserve Group

**A.S.A.P.**—As Soon As Possible

**AWBS**—Automated Weight and Balance Scheduler

**IAW**—In Accordance With

**IMT**— Information Management Tool

**MOS**—Maintenance Operations Squadron

**MXG**—Maintenance Group

**OG**—Operations Group

**OGV**—Operations Group Standardization and Evaluation

**OPR**— Office of Primary Responsibility

**PCS**—Permanent Change of Station

**QA**—Quality Assurance

**RDS**— Records Disposition Schedule

**TCTO**—Time Compliance Technical Order

**W&B**—Weight and Balance

**W&BPM**—Weight and balance Program Manager